

SUPPORT FOR THE AMENDMENT

This Amendment amends the specification to correct typographical errors; and adds new Claim 4. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claim 4 is found in the specification at least at page 4, line 20 to page 5, line 14. No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-4 will be pending in this application. Claim 1 is independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

Applicants thank the Examiner for the courtesies extended to their representative during the November 1, 2005, personal interview. However, contrary to the Interview Summary's statement that "Applicant's rep argued Meguro does disclose process so concavities would not be inherent", Applicants' representative actually argued that Meguro does *not* disclose Applicants' process, so that the independent Claim 1 limitation related to concavities would not be inherent in Meguro. Applicants' position is detailed below.

The present invention relates to a magnetic recording medium having excellent surface smoothness and superior electromagnetic conversion characteristics. Specification at page 1, lines 5-8. The magnetic recording medium comprises a lower non-magnetic layer (deposited by a step A) on a non-magnetic support, an upper magnetic layer (deposited by a step B) on the lower non-magnetic layer, and a back coat layer (deposited by a step C) on the other surface of the non-magnetic support. A calendering step D is performed after a layer is formed on each surface of the non-magnetic support. Specification at page 41, line 22 to

page 42, line 10. Because the calendering step D is not performed with either of the surfaces of the non-magnetic support exposed, there is no direct contact between the non-magnetic support on the calender rolls, so scraping of the support or of fillers contained within the support does not occur. Specification at page 44, lines 2-9. As a result, the present invention achieves a magnetic recording medium in which the number of concavities with a depth of 30 nm or greater in the surface of the upper magnetic layer is 5 per 1 cm² of surface area or less.

Claims 1-3 are rejected under 35 U.S.C. §103(a) over U.S. Patent 6,890,646 ("Meguro") alone or in view of admitted prior art ("APA").

Meguro discloses a magnetic recording medium comprising a non-magnetic layer and a magnetic layer in this order on a non-magnetic support. Meguro at Abstract. Meguro discloses that a back coat layer can be provided on the reverse side of the non-magnetic support from the side on which the non-magnetic layer and the magnetic layer are provided. Meguro at column 16, lines 37-39. The object of Meguro's invention is achieved by specifying the thickness and aspect ratio of filler incorporated into the non-magnetic support to within prescribed ranges. Meguro at column 2, lines 19-30.

However, Meguro fails to suggest the independent Claim 1 limitation that "the number of concavities with a depth of 30 nm or greater in the surface of the upper magnetic layer is 5 per 1 cm² of surface area or less".

The Office Action asserts at page 3, section 1, that this limitation is inherent in Meguro because Meguro discloses the process used by Applicants.

Applicants respectfully traverse this assertion.

Meguro does not disclose the same process utilized by Applicants to achieve the concavity feature of independent Claim 1. Meguro discloses depositing a non-magnetic layer on a non-magnetic support, followed by depositing a magnetic layer on the non-magnetic layer, followed by calendering (corresponding to the sequence A → B → D). Meguro at column 19, line 55-58; column 20, line 35; column 22, lines 40-59; column 23, line 33 to column 24, line 5.

However, Meguro fails to suggest the process by which the present invention achieves the concavity feature of independent Claim 1 of performing step D only after both sides of the support are coated (e.g., A → C → D; C → A → D; B → C → D; or C → B → D). See specification at page 42, lines 2-10; page 44, lines 2-16.

The specification at page 64, Table 1, provides experimental evidence confirming that Meguro does not inherently suggest the concavity feature of independent Claim 1. See Table 1, reproduced below:

Table 1

| | Application method for multi-layer | Step sequence* | Calendering | | Ra (nm) | Rz (nm) | AFM Ra (nm) | Concavity (number/cm ²) | Write error (error/MB) |
|-----------------------|------------------------------------|----------------|--------------------|-----------------|---------|---------|-------------|-------------------------------------|------------------------|
| | | | Roll configuration | Condition | | | | | |
| Example 1 | W/D | A→B→C→D | S-S | 100°C, 350kg/cm | 2.8 | 17.1 | 4.5 | 0.1 | 0.148 |
| Example 2 | W/D | A→B→C→D | S-R | 100°C, 350kg/cm | 2.8 | 18.3 | 4.3 | 0.3 | 0.170 |
| Example 3 | W/D | A→B→C→D | S-R | 100°C, 300kg/cm | 3.1 | 20.9 | 4.8 | 0.6 | 0.226 |
| Example 4 | W/D | A→B→C→D | S-R | 80°C, 300kg/cm | 3.1 | 21.7 | 5.8 | 4.8 | 0.500 |
| Comparative Example 1 | W/D | A→D→B→C→D | S-S | 100°C, 350kg/cm | 3.1 | 19.4 | 4.3 | 16.7 | 0.780 |
| Comparative Example 2 | W/D | A→D→B→C→D | S-R | 100°C, 350kg/cm | 3.2 | 21.0 | 5.3 | 23.3 | 1.286 |
| Comparative Example 3 | W/D | A→D→B→C→D | S-R | 100°C, 300kg/cm | 3.6 | 23.8 | 5.8 | 26.0 | 1.539 |
| Comparative Example 4 | Single layer | B→C→D | S-R | 100°C, 300kg/cm | 5.6 | 35.0 | 7.1 | 0.5 | 1.800 |

* Step sequence; A: the lower non-magnetic layer formation step

B: the upper magnetic layer formation step

C: the back coat layer formation step

D: the calendering step

Table 1 shows in Examples 1-4 that when step D follows steps A and C (i.e., calendering only after both sides of the support are coated) the concavity number is 5 per 1 cm² of surface area or less.

Table 1 also shows in Comparative Example 4 that when step D follows steps B and C (i.e., calendering only after both sides of the support are coated) the concavity number is 5 per 1 cm² of surface area or less.

In contrast, Table 1 shows in Comparative Examples 1-3 that when step D occurs before both of steps A and C (i.e., calendering before both sides of the support are coated) the concavity number is significantly higher than 5 per 1 cm² of surface area.

Because Meguro fails to suggest the process (i.e., calendering only after both sides of the support are coated) utilized by the present invention to achieve the low number of concavities featured in Claim 1, and is silent about the number of concavities per cm² in the magnetic layer, the independent Claim 1 limitation that "the number of concavities with a depth of 30 nm or greater in the surface of the upper magnetic layer is 5 per 1 cm² of surface area or less" is not inherent or suggested by Meguro. APA fails to remedy the deficiencies of Meguro. Thus, the rejection under 35 U.S.C. §103(a) should be withdrawn.

Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-8 of U.S. Patent Application No. 10/823,564 (corresponding to U.S. Patent Application Publication No. US2004/0209121A1 ("Yajima")). Because 10/823,564 has not issued as a patent, this rejection is a provisional rejection. Pursuant to M.P.E.P. §822.01, Applicants respectfully request that after all other rejections have been withdrawn the Examiner withdraw the provisional obviousness-type double patenting rejection.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

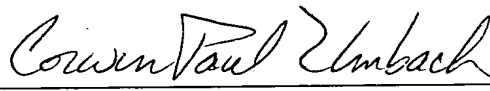
Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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